WHAT IS CLAIMED IS:

1. An image processing system comprising:

a buffer unit extracting nxm pixel matrix block data from image data, where n and m are integers;

a binarizing unit transforming the n x m pixel matrix block data into binary data represented by a maximum value and a minimum value;

differential data calculating unit calculating differential data which is a difference between a value of each pixel in the n x m pixel matrix block data and one of the maximum value and the minimum value of the binary data;

a sub-band transform unit transforming the differential data by a sub-band transform method so as to obtain a transform factor having a plurality of frequency components; and

an encoding unit encoding the binary data and the sub-band transform factor so as, to obtain a code representing the image data.

2. The image processing system as claimed in claim 1, wherein said encoding unit deletes lower order bits of the sub-band transform factor so that the code has a predetermined fixed length.

3. The image processing system as claimed in claim 2, wherein said encoding unit deletes more lower order bits from the high-frequency component than the low-frequency component when both the maximum,value and the minimum value exist in the binary data of the same block data.

4. The image processing system as claimed in claim 1, wherein said encoding unit quantizes the high-frequency component of the sub-band transform factor by a vector quantizing method.

5. An image processing method comprising the steps of:

extracting n x m pixel matrix block data from image data, where n and m are integers;

transforming the n x m pixel matrix block data into binary data represented by a maximum value and a minimum value;

calculating differential data which is a difference between a value of each pixel in the n x m pixel matrix block data and one of the maximum value and the minimum value of the binary data;

transforming the differential data by a sub-band transform method so as to obtain a transform factor having a plurality of frequency components; and

encoding the binary data and the sub-band-transform factor so as to obtain a code representing the image data.

6. An image processing system comprising:

a dividing unit dividing image data into a plurality of n x m pixel matrix block data, where n and m are integers;

a transform unit transforming each pixel in the n x m pixel matrix block data by a frequency transform method so as to produce a transform factor including a high-frequency component and a low-frequency component;

an image area discriminating unit for determining whether the block being processed corresponds to an edge area or a non-edge area based on the transform factor output from said transform unit;

a quantizing unit quantizing the transform factor for the edge area and the transform factor for the non-edge area by different methods; and

an encoding unit encoding an output of said quantizing unit by an entropy encoding method,

wherein a total of a number of bits of the high-frequency component and a number of bits of the low-frequency is the same regardless of types of the edge area or the non-edge area, and a number of bits of the high-frequency component for the edge area is the same as a number of bits of the low-frequency component of the non-edge area.

7. The image processing system as.claimed in claim 6, wherein said encoding unit encodes error data generated by said quantizing unit.

8. The image processing system as claimed in claim 6, wherein an encoding of the image for the edge, area is performed by using, only the high-frequency component, and an encoding of the image for the non-edge area is performed by using only'the low-frequency component.

9. The image processing system as claimed in claim 6, wherein every other block data is used for restoring an original image.

10. An image processing method comprising the steps of:

dividing image data into a plurality of n x m pixel matrix block data, where n and m are integers;

transforming each pixel in the n x m pixel matrix block data by a frequency transform method so as to produce a transform factor including a high-frequency component and a low-frequency component;

determining whether the block being processed corresponds to an edge area or a non-edge area based on the transform factor output from said transform unit;

quantizing the transform factor for the edge area and the transform factor for the non-edge area by different methods; and

encoding an output of said quantizing unit by an entropy encoding method,

wherein a total of a number of bits of the high-frequency component and a number of bits of the low-frequency is the same regardless of types of the edge area or the non-edge area, and a number of bits of the high-frequency component for the edge area is the same as a number of bits of the low-frequency component of the non-edge area.